

Notice of Allowability

Application No.

10/708,867

Examiner

Patrick A. Darno

Applicant(s)

HAYDEN, MARK G.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/27/2006.
2. ☒ The allowed claim(s) is/are 18-38.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


DON WONG
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

DETAILED ACTION

1. Claims 18-38 are allowed over the prior art of record.
2. An Examiner's Amendment to the record appears. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.

EXAMINER'S AMENDMENT

3. Claim 1: (amended): A system for use in achieving distributed data storage over a computer network comprising:

a storage server system comprising one or more storage servers that each comprise a data storage device and a network interface for communicating with one or more application clients that will require data storage and at least one management storage server; and

a management server system comprising one or more management storage servers that each comprise a network interface for communicating with an application client and each of said storage servers;

each of said management servers and each of said data storage servers comprising a data storage configuration identifier whose value is indicative of an allocation of data storage within said storage server system at a point in time, the allocation of data storage within said storage server system comprising one or more

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virtual volumes of data storage distributed over one or more of said storage servers;

wherein each of said management storage servers is capable of providing a first value for said data storage configuration identifier to an application client and each of said storage servers, and each of said management storage servers is capable of asynchronously providing a second value for said data storage configuration identifier to the application client and to each of said storage servers after there is a change in the allocation of data storage within said storage server system; and

wherein each of said storage servers is capable of: (a) comparing a value for said data storage configuration identifier which is associated with a data storage related request received from an application client with said second value for said data storage configuration, and (b) when the values are not equal, providing an indication to a management storage server that the values are not equal.

Allowable Subject Matter

4. The following is an Examiner's statement of reasons for allowance: The prior art of record fails to teach and or suggest wherein "each of said management servers and each of said data storage servers comprising a data storage configuration identifier whose value is indicative of an allocation of data storage within said storage server system at a point in time; the allocation of data storage within said storage server system comprising one or more virtual volumes of data storage distributed over one or more of said storage servers; wherein each of said management storage servers is capable of providing a first value for said data storage configuration identifier to an

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application client and each of said storage servers, and each of said management storage servers is capable of asynchronously providing a second value for said data storage configuration identifier the application client and to each of said storage servers after there is a change in the allocation of data storage within said storage server system." The preceding limitations, when combined with the rest of claim limitations recited in claim 1, result in a combination of elements that is both novel and unobvious over the prior art of record.

5. Any comments considered necessary by Applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick A. Darno whose telephone number is (571) 272-0788. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

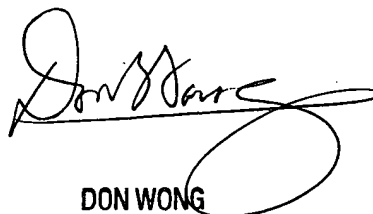
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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